

AMENDMENT TO THE CLAIMS

1. (Currently amended) A method for measuring dielectric constant of body tissues under the skin and body impedance based on a method of frequency digital sampling and for evaluating body composition, ~~the steps comprising~~ inputting by keyboard the a testee's serial number, height, age, gender, and parameter indicating whether or not an athlete; testee standing a testee with the testees feet on thea measuring platform having a weighing sensor to measure body weight, the providing a body weight signal coming from the weighing sensor being converted to the body weight frequency signal byto a weighing signal processing circuit; the generating oscillating frequency signals related to testee's impedances and dielectric constant of tissues under the skin generating from with a positive feedback RC oscillator circuit and being eonnected connecting the positive feedback RC oscillator circuit to an MCU system for frequency digital sampling; calculating body fat content and total body water by software of the MCU system, and displaying body weight, body fat content and total body water on the display, wherein ~~the said the method further comprises the following steps of:~~

~~converting the signal coming from the weighing sensor to~~ providing the body weight frequency signals from the weighing signal and processing circuit as frequency signals;

~~making~~ connecting the positive feedback RC oscillator circuit eonnected with two ends of a capacitance grid sensors to generate an oscillating frequency related to dielectric constant of body tissues under the skin by positioning testee's feet soles to contact a capacitance grid sensor on the measuring platform;

~~making~~ connecting the positive feedback RC oscillator circuit eonnected with two electrode plates or two groups of electrode plates on the measuring platform, and generateing an oscillating frequency signals related to body impedance by positioning the testee's feet soles to contact the two electrode plates or two groups of electrode plates within a certain area on the measuring platform;

~~introducing the switched capacitors with different capacitance values to the said positive~~

feedback RC oscillator circuit ~~to get and obtaining~~ several oscillating signals with non-fixed different frequencies related to body impedance;  
~~inputting~~ inputting the body weight frequency signals ~~through the I/O interface of the microprocessor~~ coming from the weighing signal processing circuit, the oscillating frequency signals related to dielectric constant of body tissues under the skin and body impedance signals corresponding to the non-fixed different frequencies from the switched capacitance through I/O interfaces of the MCU system;  
~~through the software of the microprocessor~~ calculating from the signals provided to the I/O interface ~~thea~~ the ratio between calculating intracellular water and total body water through software of the MCU system; and  
displaying the ratio between intracellular water and total body water ~~on the display~~.

2. (currently amended) The method according to claim 1, wherein: one end of the said capacitance grid sensor (Cm) in contact with testee's feet soles is connected with one end of a capacitor (Ca); and ~~the other ends of the capacitance grid sensor and capacitor are respectively connected with thean~~ output end of one inverter and an input end of the another inverter; and the input end of the one inverter is connected with thean output end of the another inverter; and wherein the oscillating frequency signals related to dielectric constant of body tissues under the skin ~~isare~~ generated.

3. (currently amended) A method according to claim 1, wherein: the input end of one inverter is connected with the output end of the ~~otheranother~~ inverter at a connection; and ~~between the joint of the two invertors and the input end of one inverter, connecting thea~~ series-wound circuit comprising bya resistor (Ra) and body impedance element (Rm) between the connection and an input end of the one inverter, is introduced; and ~~the two ends of thea capacitor (Ca) are connected respectively with the two invertors' two ends which are not connected with each other~~; an output end of the one inverter and an input end of the another inverter and wherein

oscillating frequency signals related to body impedance is~~are~~ generated.

4. (currently amended) A method according to claim 1, wherein: ~~the~~a body impedance element (Rm) is in a series connection with a first resistor Ra2 and then in parallel connection with a second resistor Ra1 to form a series-parallel circuit; ~~the one end of the series-parallel circuit in series-parallel connection is connected with the~~to an inverting end~~terminal~~ of ~~the~~a D trigger; and the another end of the series-parallel circuit is connected with ~~the~~a CD end, a CLK end, and a GND end of the D trigger; and wherein oscillating frequency signals related to body impedance is~~are~~ generated.

5. (currently amended) A method according to claim 1, comprising ~~the step of~~ introducing a body impedance element (Rm) to said positive feedback RC oscillator circuit; switching and introducing capacitors C1, C2, .....Cn respectively to said positive feedback RC oscillator circuit; ~~getting and providing~~ several oscillating signals with non-fixed different frequencies related to body impedance (Rm).

6. (currently amended) A body composition monitor apparatus for measuring dielectric constant of body tissues under the skin and body impedance based on a method of frequency digital sampling, comprising a measuring unit and a display unit, ~~which above two~~where the measuring unit and the display units comprises a measuring platform, a pair of electrode plates, a weighing sensor, a MCU system, a display, and a keyboard; wherein ~~the~~ said apparatus also includes a weighing signal processing circuit, ~~that converts the signal coming from weighing sensor to the body weight frequency signal~~, a positive feedback RC oscillator circuit for measuring a dielectric constant of body tissues under the skin and body impedance, and ~~more than one~~a plurality of capacitance grid sensors providing dielectric constant signals of body tissues under the skin to said positive feedback RC oscillator circuit, wherein:

the electrode plates form electrodes for measuring body impedance of a person standing thereon and ~~is~~being connected as ~~a two end impedance element (Rm)~~ with the

said positive feedback RC oscillator circuit to provide an impedance signal only to  
said positive feedback RC oscillator circuit; and  
the ~~said~~ positive feedback RC oscillator circuit, and the weighing signal processing circuit  
are in electrical connection with a microprocessor of the MCU System.

7. (cancelled)

8. (currently amended) Apparatus according to claim 6, wherein: in one connection mode  
of ~~the~~ said positive feedback RC oscillator circuit for measuring dielectric constant of body  
tissues under the skin, one end of ~~the~~ one capacitance grid sensor (Cm) is connected with one end  
of a capacitor (Ca); ~~the~~ other ends of the one capacitor grid sensor Cm and the capacitor Ca are  
respectively connected with ~~the~~ an output end of one inverter and an input end of the an other  
inverter; a resistor (Ra) is in series circuit connection with a body impedance (Rm), and ~~the~~ other  
ends of the series circuit are respectively connected with ~~the~~ an input end and the output end of  
the one inverter; the input end of the one inverter is connected with ~~the~~ an output end of the other  
another inverter.

9. (currently amended) Apparatus according to claim 6, wherein: in one connection mode  
of ~~the~~ said positive feedback RC oscillator circuit for measuring body impedance, ~~the~~ an input  
end of one inverter is connected with the output end of ~~the~~ another inverter; connecting a series  
wound circuit comprising a resistor (Ra) and the body impedance (Rm) between the joint  
connection of the two invertors and ~~the~~ an input end of the inverter; ~~the~~ a series-wound circuit  
comprising by a resistor (Ra) and a body impedance (Rm) is introduced; and the two ends of  
~~the~~ a capacitor (Ca) are connected respectively to an output end of the one inverter and an input  
end of the another inverter.

10. (currently amended) Apparatus according to claim 6, wherein: in one connection mode  
of the said positive feedback RC oscillator circuit for measuring body impedance, a body

impedance ( $R_m$ ) is in series connection with a first resistor ( $R_{a1}$ ) and ~~then~~ in parallel connection with a second resistor ( $R_{a2}$ ) to form a series-parallel circuit; ~~the one end of the series-parallel circuit in series-parallel connection is connected with the~~ an inverting end of the D trigger; and ~~the other a second end of the series-parallel circuit is connected with the~~ a CD end, a CLK end, and a GND end of the D trigger.

11-14. (cancelled)

15. (currently amended) Apparatus according to claim 6, wherein: ~~the said measuring apparatus includes an infrared signal emitting emitter circuit; an electrical signal is input from the~~ base electrode of a first audion (T1); the collectors of the first audion (T1) and a second audion (T2) are connected with one port of the infrared emitter; and the other another port of the infrared emitter is connected with a current-limiting resistor (R1); the infrared emitter ~~emitting a real-time infrared data signal; and an infrared receiver receives~~ receiving the infrared instruction data signal emitted by the said display apparatus, which is converted to an electrical signal and then transmitted from the infrared receiver to the base electrode of a third audion (T3); the collector of the third audion (T3) is connected with the input level of a decoder; the output level of the decoder is connected with the MCU System. of the measuring apparatus.

16. (currently amended) Apparatus according to claim 6, wherein: ~~the said display apparatus unit includes an infrared emitter comprising an infrared signal transmitting circuit; a receiver receiving the infrared signal and providing an electrical signal that is transmitted from the infrared receiver to the~~ base electrode of a first audion (T7); the collector of the first audion (T7) is connected with the interface of the MCU system of the display apparatus unit; the interface of the MCU system of the display apparatus unit sends electrical signal to the input interface of an encoder, where the encoder having an output interface is connected with the base electrode of a second audion (T5); the collectors of the second audion (T5) and a third audion

(T6) are connected with one port of the infrared emitter; and ~~the other~~ port of the infrared emitter is connected with a current-limiting resistor (R4); whereby the infrared emitter emits infrared instruction signals.